

# **Smallholding in the Selwyn District**

**Andrew J Cook  
John R Fairweather**

**Research Report No. 280  
December 2005**

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**December 2005**

**Research Report No. 280**

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## **Preface**

Land use change can often generate interest among the rural community, and this is particularly true when farm land is changed by smallholding subdivision. AERU Research Report No. 277 has recently documented the national situation by reporting the results of a national survey of smallholders. The present report continues this theme of research by reporting the results of a survey of smallholders in Selwyn District. While of smaller scope it does allow for some detailed assessments to be made of where smallholders work and shop, and shows more clearly where and how they identify with their rural community. This report will be of interest to those concerned about the specific effects of smallholder subdivision on the rural community.

**Prof. Caroline Saunders**  
**Director**



## Summary

This research provides a general profile of smallholders and identifies social and environmental issues of interest to the Selwyn District Council.

- A sample of 1,200 cases was randomly selected from the smallholding population of 1 to 40 hectares in size. The survey derived 492 usable responses with a revised response rate of 41 per cent.
- General characteristics of smallholders were gathered including average size of property (seven hectares), average years lived on a smallholding (ten), previous farm experience (66 per cent), average intended length of stay (76 per cent), as well as demographic information including income and household composition.
- West Melton, Rolleston and Lincoln were identified as the nearest local villages or towns to most smallholders, as well as being readily identified with by most smallholders. However, goods, services and employment were shown to be mostly derived from Christchurch. Most respondents (65 per cent) worked in Christchurch, with the most common distance to work being 20-50 kilometres.
- Recorded attitudes showed high levels of satisfaction with their smallholding, the most important motivation was the desire for a rural or country lifestyle. Limiting the size of subdivision was important to smallholders and an important community value was to feel safe.
- Business activity from land use was shown to be undertaken to some extent by 69 per cent of smallholders but most of these had only low on-farm income.
- Own experience was the most important source of information for business activity, with government agencies and private consultants being the least important.
- Issues regarding subdivision of the land were of primary concern. Smallholders disliked the idea of close neighbours and believed that further subdivision would adversely change the nature of their smallholding experience. However, while objecting to subdivision in general, 40 per cent, if possible, would subdivide their own properties.
- Smallholders spent a good deal of time caring for and maintaining their large areas of lawn and garden and had an average annual expenditure on lawn and garden of \$1,415.
- The most important rural problems were fire risk and lack of water. Loss of biodiversity was the least important problem. Similar ranking was found for smallholder judgements of the importance of the problems to farmers with the difference that rural problems were seen by smallholders to be more important for farmers.
- There were a number of differences between smallholders based on levels of income from on-farm business activity. Those with high on-farm income had larger properties and fewer choose lifestyle as an important factor in their smallholding. Amongst other differences, they tended to agree that the land was an investment and an economic resource, wanted to subdivide and generally had less off-farm income than other smallholders.



# **Chapter 1**

## **Introduction**

### **1.1 Introduction**

This is a report of an investigation of smallholders in the Selwyn District of Canterbury, New Zealand. The overall purpose of the research was to characterise the smallholders of the district with the general aim of informing the Selwyn District Council about smallholding and smallholder issues. An imperative for specifically researching smallholders was that they comprise approximately one-third of the ratepayers in the Selwyn District, a proportion that is increasing, and little was known about them.

Research on smallholders is important because social demand and the ability to subdivide have led to a growth in smallholding. It has been estimated that in 2004 the total area covered by smallholdings in New Zealand was 753,020 hectares and that just over 37,600 hectares of rural land is converted to smallholding per year (Sanson, Cook & Fairweather, 2004). This growth can be expected to lead to particular social effects involving changes in rural communities, different types and intensities of agricultural production, and differences in the types and intensity of environmental issues. While there have been a number of useful studies of smallholdings conducted in Canterbury these studies do not provide for a detailed representative account of smallholder issues in the Selwyn District. In conducting a representative survey the research is designed to accurately characterize the smallholder situation and the activities associated with smallholding in the Selwyn District.

### **1.2 Studies of smallholding in Canterbury**

An early study of smallholding in Canterbury was conducted by Mears (1974) who examined part-time farmers on the urban fringe of Christchurch. While principally concerned with land valuation and subdivision, Mears (1974) found that smallholding was becoming popular because of a desire for quality of life with often little interest in productive use of the land. The study concluded that the main imperative for a rural/urban lifestyle was the belief that smallholding enabled a better lifestyle which stemmed from living in a rural location. Similarly, Edwards (1992), in a study of hobby farmers in Canterbury, identified that ideas of a better lifestyle were important in the desire to own a smallholding, but added the qualifier that these smallholders did not necessarily wish to become farmers. In a more in-depth study Fairweather (1993) found for Canterbury smallholders that the attraction of a somewhat idealised image of a rural lifestyle was important in the decision to purchase a smallholding. In addition, those currently living on a smallholding tended to rank farming and agricultural interests as low priorities. Common motivations for smallholding were identified as the appeal of the rural environment and its associated lifestyle, including clean air and open spaces. Subsequently this work was extended upon by Swaffield and Fairweather (1998) in an investigation of smallholder desires for country living. The researchers examined lifestyle issues and identified common themes associated with smallholders' desire to celebrate rural peace, relaxation and pleasure, social stability, material wealth and associated comforts, and simple living.

These early studies of smallholding in Canterbury have resulted in two main related findings. First, smallholders do not necessarily engage in productive activity on their smallholdings

and many have no production intentions. This has given substance to a common concern that productive agricultural land is being lost in the subdivision of rural land for smallholding. Second, there are a number of common motivations for smallholding which centre on lifestyle and which do not include productive use of the land.

A more recent survey of smallholders in Canterbury had broader objectives. Fairweather and Robertson (2000) analysed responses from 218 smallholders who lived within 40 kilometres of Christchurch. The study described general characteristics, isolated and examined differences between lifestylers and other smallholders, and investigated intentions to move. Similar to Fairweather (1993), it was found that peace and quiet, privacy, clean air and openness were motivating factors. Lifestylers, comprising about one-half of those surveyed, tended not to be serious about production and nearly two-thirds of the smallholders did not receive any income from the land. Eighty-one per cent had no intention to move from their smallholding in the subsequent five years. Another recent study interviewed 18 lifestyle block residents in North Canterbury Hayes (2002). The research derived a list of complaints and related actions taken by the residents. Noise, smell, weed control, increasing land values, crowding and water issues were identified as prominent factors that often resulted in a complaint to the local council.

A national survey of smallholders conducted by Cook and Fairweather (2005) for the Ministry of Agriculture and Forestry (MAF) was based on 947 responses to a postal survey. Since the survey included responses from Canterbury smallholders, the results give a general picture of smallholding that would apply to Canterbury. Forty per cent of the sample described themselves as lifestylers and this group was found to be different to other groups of smallholders. In general, lifestylers had smaller properties, had not been on their properties as long, and had less experience at farming than other smallholders. The study also found that smallholders appeared to have high levels of production, but it was also found that this high level was the result of skewed data because a few smallholders had particularly high incomes while a sizable proportion (38 per cent) did not report any income from their land. Many smallholders were engaged in agricultural production, but in general this production was not found to be sufficient to solely support a household. Of particular interest to MAF, smallholders were, in general, found to be engaged in the management of diseases, pests and weeds and had an awareness of biosecurity issues and practice.

Overall, these studies of smallholders have given attention to smallholder reasons for and against smallholding. The studies also substantiate the view that smallholding results in the loss of agricultural land because there is a proportion of smallholders who have no production. The studies show the nature of the smallholder phenomenon and were based on surveying the perceptions of lifestyle of those involved. The later surveys have included this line of enquiry, but were much more substantial in their investigations of attributes of the smallholding, such as size, productivity and household sources of income. A good deal of valuable information has certainly been uncovered, but for the purposes of precisely understanding the smallholding situation and related issues in Selwyn District, these studies are limited and a more focused study is needed. The research reported here continues some of the themes of research already studied but also introduces some new themes such as where the respondents are located, which places they identify with and where they go to shop or go for various services.



### **1.3 Aims and objectives**

The aims of this research were to provide a general profile of smallholders and identify the social and environmental issues of interest to the Selwyn District Council. Towards these aims the research had the following objectives:

- Construct a general profile of smallholders comprising of size of property, years lived on a smallholding, as well as measuring for previous farm experience and intended length of stay, and demographic information including income and household composition.
- Establish the location of the local villages or towns with which smallholders identify and establish the extent to which these places are used by smallholders for typical shopping and use of retail and professional services and community activities, compared with seeking these services in Christchurch.
- Determine the values and attitudes of smallholders as they relate to smallholding lifestyles.
- Determine the extent of business activity from land use by smallholders as well as information sources for business decision making, level of capital investment and future production estimates.
- Determine the level of need to subdivide, and need for additional dwellings.
- Determine the time, effort and cost associated with maintaining lawns and gardens on smallholdings.
- Determine the perceived importance of regional problems including noxious weeds and fire risk to smallholders.
- Determine the amount of unpaid work, paid work, for smallholder households as well as smallholding income and expenditure.
- Investigate differences between smallholders based on levels of income from business activity on the smallholding.

The meeting of these aims and objectives has involved the gathering of information about smallholdings by conducting a representative postal survey to enable a clear view of smallholders and issues arising from smallholding in the Selwyn District.

### **1.4 Report structure**

This report is organised as follows. An overview of the questionnaire used to gather the data for this research is provided in Chapter 2. The presentation of the results of the data analysis is provided in Chapter 3. Discussion provided in Chapter 4 begins with a summary of the findings and finishes with the main conclusions of the research.



## **Chapter 2**

### **Method**

#### **2.1 Introduction**

The investigation of smallholders and smallholding in the Selwyn District was undertaken by means of a postal questionnaire sent to a random sample of smallholders with property sizes ranging from one to 40 hectares. The random sample was drawn by the Selwyn District Council from its records. This chapter outlines the questionnaire which was designed in consultation with council representatives working in the areas of economic development, civil engineering, as well as planning and policy.

#### **2.2 The questionnaire**

The questionnaire comprised a 12 page A4 booklet, printed on both sides of each page. A copy of the questionnaire completed by the smallholder respondents is provided in Appendix 1. A separate covering letter from the mayor of Selwyn District introduced the questionnaire and explained the purpose of the study.

The overall design of the questionnaire was derived from earlier research (Fairweather & Robertson, 2000; Cook & Fairweather, 2005) and a number of questions from these earlier studies were adapted for use in the questionnaire. The questionnaire requested approximately 180 responses depending upon the particular situation of each smallholder respondent. It was estimated that the questionnaire would have taken approximately 30 minutes to complete. Only limited pretesting was performed (four smallholders). However, the responses from the four pretests and the adaptation of questions and general design from earlier studies suggested there would be few problems understanding and completing the questionnaire. The remainder of this section describes all the sections of the questionnaire.

##### **General questions**

The first section of the questionnaire began with general questions about the size of property, years lived on a smallholding, as well as measuring for previous farm experience and intended length of stay.

##### **Location and travel distances**

The second section of the questionnaire began with questions about the name of the nearest town or village and its distance from the smallholding. This question was designed to establish the location of each smallholding in terms of distance to a recognised location. Further enquiry was made concerning whether this place was readily identified with by the smallholder family and an opportunity was provided to write the name of the place the family did identify with. The section continued with a question set measuring the distance and location of a range of services and retailers used by the household. A similar measure was taken of distance to place of work, and a measure was taken of the weekly fuel costs for the smallholder and his or her family.

Information regarding location and travel distances was gathered to enable an accurate description of smallholder reliance on transport as well as a description of the geographic distribution of the goods and services that smallholders sought. It was expected that the proportion that rely on Christchurch City for services and retailers as well as for employment could serve as a useful indicator of orientation to a city or rural lifestyle. The information was also gathered to enable comparison between the local town or village and where smallholders were actually using services and retailers.

## **General attitudes**

This section began by measuring general levels of smallholder satisfaction and orientation towards lifestyle and land use. The importance of eleven reasons for smallholding, when purchased and at present, were then measured using a set of questions developed by Fairweather and Robertson (2000). Also based on this earlier study, measurement was taken of the relevance of ten disadvantages in terms of their relevance at present and when the smallholding was purchased. Together, these questions sets were included to provide for a comprehensive appraisal of perceived advantages and disadvantages of smallholding.

A further question measured the personal relevance of four examples of ways that a smallholder could value their land. The first espoused utilitarian values and promoted monetary value and economic considerations. The second was a Maori viewpoint and the third attempted to capture the key elements of an environmental viewpoint. Finally the fourth was designed to capture the valuing of the land as if it was a decorative garden. In this question set, each of the four examples was measured separately in terms of relevance. The question set was derived from analysis of the discursive conventions of Otago farmers (Read, 2005) with assistance from the author. The inclusion of these value questions in the questionnaire was somewhat exploratory, but it was nevertheless envisaged that the measurement of relevance of the four value statements could usefully serve to explain other measures in the questionnaire.

The section continued with the request to list up to three important values of smallholding. The inclusion of these questions provided smallholders with the opportunity to state their values that they thought should be protected.

A further question set measured the importance of 13 objectives to make the community a better place to live in ten years from now. The objectives were drawn from key elements of the vision for the future of Canterbury which has been developed by a number of Canterbury councils in meeting their responsibilities under the Local Government Act (see [www.futurepath.org.nz](http://www.futurepath.org.nz)). The vision, developed with public consultation, was presented as necessary elements for good quality of life in 50 years time. The final set of objectives presented in the questionnaire contained the key elements supplemented by measures of well-being proposed to enhance regional development (Saunders & Dalziel, 2005).

The general attitudes section concluded with asking for the names of two voluntary organisations the respondent or their family were involved, in as well as recording the total number of organisations. It was intended to show the extent to which smallholders were involved in rural communities through their associations with voluntary organisations. A similar question was asked in the Selwyn Community Safety Survey 2004.

## **Land use**

The approximate gross income from land use was sought using three question sets that respectively dealt with livestock, plants and other land uses comprised of tourism and other business activities. As well as a list of activities for each question set, an 'other' response box was provided to ensure all possible uses could be recorded. The question set was adapted from Fairweather and Robertson (2000), but was simplified to gather only information pertinent to the present study.

In a separate question sources of information for the development and management of business activities was measured. Respondents were instructed to indicate the importance of a range of possible sources ranging from neighbours to private consultants as well as providing their own source if not listed in the question set.

To investigate topics of importance to the Selwyn District Council one question measured the desire to subdivide and a further question measured the desire to build a second dwelling on the smallholding. Both desires are common and these questions were included to help ascertain the extent of this need. Measures of satisfaction with current land size and preferred land size similarly measured the desires of smallholders.

A measure of business activity associated with land use was made in enquiry about estimates of higher or lower production and production in two years' time. A further view of productive activity was then provided through enquiry of the amount of capital investment in production.

Four questions were then used to measure the extent of smallholder involvement in caring for their lawn and garden. Area, time, use of installed irrigation and the annual cost of caring for the lawn and garden were measured. The intensity of American involvement in caring for their lawns, often in contrast to 'green' values, has been associated with aesthetics, the need for meaningful work and family values (Robbins & Sharp, 2003). Given the common association of smallholdings with a large garden and lawn, and extensive time and effort, for example in using a ride-on mower, these four questions were included to briefly investigate smallholder involvement with their lawn and garden.

The importance of seven problems, including noxious weeds and fire risk, associated with agriculture and rural living, was then measured. The reason for gathering smallholder perceptions of these problems was because they are a community concern. Both importance to the smallholder and importance to farms in general was measured for a wide view of the problems.

Three questions, one about sources of clean water and two regarding the age and cleaning of septic tanks completed the section about land use.

## **Respondent characteristics**

This final section included questions regarding gender and age, and hours of unpaid work by family members and contracted manager on the property. The family member off-farm employment status was included as well as enquiry regarding the income of family members. Household composition was measured as well as straightforward measures of annual gross income from the smallholding as well as annual expenditure on the smallholding.

## **2.3 Response rate**

Within three and a half weeks of posting the questionnaire, 492 questionnaires with usable responses were returned. In addition, 12 were returned either uncompleted or without a sufficient number of responses to the questionnaire items. The response rate for usable responses was calculated as the proportion of useable questionnaires (492) over the 1,188 (1200 minus 12) that had received the questionnaire. The response rate for usable questionnaires was therefore 41.4 per cent.

## **Chapter 3**

### **Results**

#### **3.1 Introduction**

This chapter presents the results of the analyses of the survey data. The chapter begins by introducing the statistical methods that are employed in this analysis. The presentation of the results generally follows the order of questions from the questionnaire. Descriptive results are provided first followed by an analysis of differences in smallholders based on whether or not they had business activity on their smallholding.

#### **3.2 Statistical methods**

A variety of methods of statistical analysis were employed in the analysis of the survey data. Results are provided with means and standard deviations for interval or ratio data and frequency of occurrence provided for categorical data measured on either nominal or ordinal scales. Because some respondents did not reply to every question the number of responses to each item is included. T-tests and chi square were used to investigate differences between categories of smallholders formed from levels of smallholder income.

#### **3.3 General information**

##### **Size of smallholding**

Of the 492 smallholders 483 provided the size of their smallholding. In keeping with the target for the survey, size ranged between one and 40 hectares with the average being 7.4 hectares (Mean 7.39, std. dev. 6.76). Most of the smallholdings were ten hectares or smaller (596 or 81 per cent). Eleven or 2.3 per cent were 30 hectares or larger.

##### **Years lived on smallholding**

Of the 475 who provided the number of years they had lived on a smallholding, the average was 10.07 years with the longest length of stay being 52 years.

##### **Previous farm experience**

There were 484 smallholders who answered the question regarding previous farm experience. Of these 318 (65.6 per cent) indicated they had previous farm experience and 166 (34.4 per cent) indicated they had not.

##### **How long intend to stay on smallholding**

Smallholders were asked to either indicate whether they intended to stay on their property indefinitely or to specify the number of years they intended to stay. In reply, of those who responded (479) the majority indicated indefinitely (364 or 76 per cent), while the average length of intended stay for the remaining 115 was ten to eleven years.

## Location and travel distances

For the purpose of identifying the most common towns or villages used by smallholders the respondents were asked to write the name of their nearest town or village. As shown in Table 1, 32 town or village names were provided by 467 smallholders. The three most common were West Melton (75), Rolleston (66) and Lincoln (52). These places were chosen by 41 per cent of respondents. Of interest, despite being a large city, Christchurch was only nearest to eight smallholders.

**Table 1. Nearest towns and villages**

Town or village	Frequency	Town or village	Frequency
Broadfield	2	Ladbrooks	2
Burnham	9	Leeston	21
Castle Hill	1	Lincoln	52
Christchurch	8	Prebbleton	34
Coalgate	1	Rakaia	1
Darfield	35	Rolleston	66
Doyleston	3	Russels Flat	1
Dunsandel	19	Sheffield	4
Glenn Tunnel	3	Southbridge	6
Greenpark	1	Springston	14
Halkett	2	Tai tapu	33
Halswell	11	Templeton	18
Hornby	7	Waddington	1
Hororata	8	West Melton	75
Irwell	3	Whitecliff	3
Kirwee	21	Yaldhurst	2
		Total	467

The results of the enquiry into distance to the nearest town or village are shown in Table 2. As shown, the most common distance was 2-5 kilometre, chosen by 45 per cent of respondents. Few smallholders (seven per cent) selected a town or village that was more than 10 kilometres away.

**Table 2. Distance to nearest town or village**

Distance (kms)	Frequency	Percentage
0 – 2	112	23.0
2 – 5	208	42.6
5 – 10	128	26.2
10 – 20	36	7.4
20 – 50	4	0.8
Over 50	0	0
Total	488	100.0

In further enquiry, 309 (63.8 per cent) smallholders identified themselves as being part of their nearest town or village whereas 175 (36.2 per cent) indicated they were not part of their nearest town or village. The resulting list of places identified with is shown in Table 3. As shown, most smallholders identified with West Melton. Rolleston was the next most identified with place followed by Christchurch and then Leeston and Lincoln. The nearest



frequency column is taken from Table 1. A number of places had a lower frequency as the place identified with compared to the nearest town or village, for example, Darfield, Kirwee, Lincoln, Prebbleton, Rolleston, Tai Tapu and West Melton. These places may be closest to the smallholders but to some of them they are not identified with, perhaps because many of them are on main highways and we know that smallholders emphasise the peace and quiet of country living. Darfield is most noticeable as the nearest town for 35 smallholders but identified with by only five smallholders. Table 3 also includes a number of additional places identified with, such as Brookside, Charing Cross, Courtney, Ellesmere, etc., and these tend to be very small towns or locations. Some places have a higher frequency in Table 3 and these include Broadfield, Christchurch and Halswell. Christchurch was identified with by 32 smallholders but is closest for only eight. A number of smaller places in Table 1 are missing from Table 3, for example, Castle Hill, Coalgate, Glentunnel, Hororata, Waddington and Yaldhurst.

**Table 3. Places identified with**

Town or village	Identified with frequency	Nearest frequency	Town or village	Identified with frequency	Nearest frequency
Aylesbury	2	0	Ladbrooks	12	2
Bankside	1	0	Leeston	23	20
Broadfield	16	2	Lincoln	23	52
Brookside	5	0	Motukarara	1	0
Burnham	8	9	Norwood	1	0
Charing cross	2	0	Prebbleton	15	34
Christchurch	32	8	Rakaia	1	0
Courtenay	2	0	Rangiora	1	0
Darfield	5	35	Rolleston	40	66
Doyleston	2	3	Rural	1	0
Dunsandel	14	19	Sandy knolls	1	0
Ellesmere	2	0	Sheffield	5	4
Gebbies Valley	1	0	Southbridge	2	6
Greendale	3	0	Spreydon	1	0
Greenpark	2	1	Springston	11	14
Halkett	7	2	Tai tapu	27	33
Halswell	13	11	Taumuta	1	0
Homebush	1	0	Templeton	7	18
Hornby	8	7	Weedons	18	0
Irwell	2	3	West Melton	67	75
Killinchy	2	0	Windwhistle	1	0
Kirwee	8	21	Whitecliff	2	0
Kowai Bush	1	0			
			Total	386	

The average travel distance and three most common locations of a range of services and retailers is provided in Table 4. Of note, in providing these data some respondents gave a suburb of Christchurch as their answer while others simply wrote 'Christchurch'. For the outer suburbs this may have made the location unclear as the respondent could have written, for example, either Christchurch or Hornby. Therefore in collation of the written responses, Hornby and Halswell have been included in the Christchurch category, while Yaldhurst and Templeton were treated as separate from Christchurch.

To summarise Table 4 in terms of distances, six of the retailer or service providers were within 0 to 5 kilometres of most respondents. Of these, primary schools at West Melton, Weedons and Darfield were most commonly used by 183 families. A dairy, fast food or takeaways was also close to properties though many used these services in Christchurch or Rolleston. Similarly, Christchurch was used by most respondents to go to a café, licensed hotel or bar. Also, most of the churchgoing smallholders attended church in Christchurch, a high percentage had their car serviced in the city and just under a quarter purchased petrol in the city. Attending church in Christchurch suggests that smallholders on the urban fringe prefer a Christchurch church.

**Table 4. Distance to, and common location of, retailer and service providers**

<b>Retailer or service provider</b>	<b>Most common distance (kms)</b>	<b>Most common location (number and % )</b>	<b>Second most common location (number and % )</b>	<b>Third most common location (number and % )</b>	<b>n</b>
Doctor	10 – 20	Christchurch (200 – 44%)	Lincoln (86- 19%)	Darfield (44 – 10%)	458
Preschool	5 – 10	Lincoln (29 – 21%)	West Melton (19 – 14%)	Darfield (18 – 13%)	135
Primary school	0 – 5	West Melton (25 – 14%)	Weedons (14 – 8%)	Darfield (12 – 7%)	183
Secondary school	10 – 20	Lincoln (52 – 32%)	Darfield (27 – 17%)	Leeston (23 – 14%)	162
Banking	10 – 20	Christchurch (350 – 80%)	Lincoln (54 – 12%)	Internet (6 – 1%)	440
Public library	5 – 10	Christchurch (73 – 19%)	Lincoln (53 – 14%)	Darfield (47 – 12%)	380
Dairy, fast food or takeaways	0 – 5	Christchurch (86 – 20%)	Rolleston (83 – 20%)	Lincoln (46 – 11%)	423
Café, licenced hotel or bar	0 – 5	Christchurch (102 – 27%)	Rolleston (53 – 14%)	Darfield (38 – 10%)	380
Farming supplies or general hardware store	10 – 20	Christchurch (260 – 59%)	Darfield (64 – 15%)	Lincoln (25 – 6%)	439
Garden centre	10 – 20	Christchurch (194 – 49%)	Yaldhurst (61 – 15%)	Leeston (33 – 8%)	399
Pharmacy	10 – 20	Christchurch (170 – 39%)	Lincoln (74 – 17%)	Templeton (63 – 14%)	443
Clothing retailer	10 – 20	Christchurch (407 – 94%)	Darfield (13 – 3%)	Leeston (4 – 1%)	431
Church	0 – 5	Christchurch (52 - 26%)	Lincoln (33 – 16%)	Darfield (17 – 8% )	201
Supermarket shopping	10 – 20	Christchurch (305 – 68%)	Rolleston (113 – 25%)	Darfield (13 – 3%)	449
Car servicing and repairs	0 – 5	Christchurch (200 – 47%)	West Melton (33 – 8%)	Rolleston (32 – 8%)	426
Purchases of petrol	0 – 5	Christchurch (102 – 23%)	Rolleston (59 – 13%)	West Melton (33 – 7%)	443

The travel distance of 5 to 10 kilometres was most common to go to a preschool or public library. Local preschools at Lincoln, West Melton and Darfield are shown to have been most

commonly attended, and while libraries at Christchurch were most commonly used the percentage of 19 per cent was only marginally more than in Lincoln or Darfield.

Smallholders most commonly travelled between 10 and 20 kilometres to seven different types of service or retail outlets. Those going to a doctor typically travelled to Christchurch while secondary schools were attended predominantly in the Selwyn District. Banking services and farm supplies and garden centre supplies commonly sourced from Christchurch. The 80 per cent doing their banking in Christchurch probably reflects the centralisation of banking services in recent years. Similar to doctor visits, a Christchurch pharmacy was most often visited. Of particular note, Christchurch was by far the most common place for visiting a clothing retailer with 94 per cent of smallholders choosing Christchurch. A Christchurch supermarket was also used most often with Rolleston also popular for grocery supplies. The percentage using the most common location was highest on average for the 10-20kms distance (58%) compared with 23 per cent and 20 per cent for the 0-5kms and 5-10kms distance respectively. These data shows that for most of their retail and services needs (eight out of 16, and all but one in Christchurch) smallholders are travelling up to 20 kilometres and for these retail or service providers there is a higher percentage of smallholders choosing this location.

In terms of a general split between use of services and retailers for Christchurch and the Selwyn District, 13 out of 16 were mostly used in Christchurch and three were most commonly used in the Selwyn District. These three were preschools, primary and secondary schools. All the other services and retailers were most often used in the city. Of these banking, farm supplies and supermarket shopping had percentages for city use exceeding 50 per cent, with only library attendance having a low, although most often used attendance in the city, of under 20 per cent.

In terms of which places in Selwyn District that were used most often, Darfield was in the top three most common services or retailers ten times and Lincoln was in the top three nine times. Rolleston was noted five times and West Melton and Leeston were in the top three ten times, with West Melton being the most commonly attended primary school. Yaldhurst, Templeton and Weedons had only one entry each.

### **Distance and location of off-farm place of work**

Distance and off-farm place of work were collated and summarised in the same manner as the previous question set for retail and service providers. As shown in Table 5, the predominant off-farm place of work was Christchurch. A much smaller percentage was found for Lincoln and Leeston.

**Table 5. Distance and location of off-farm place of work**

<b>Most common distance (kms)</b>	<b>Most common location (number and %)</b>	<b>Second most common location (number and %)</b>	<b>Third most common location (number and %)</b>	<b>n</b>
20 – 50	Christchurch (224 – 65%)	Lincoln (21 – 6%)	Leeston (11 – 3%)	347

In another measure of distance travelled Table 6 shows that the most common weekly fuel cost for the family was \$60 to \$100 and \$30 to \$60 which together accounted for

approximately 67 per cent of the respondents. Of note, just over 20 per cent had spent more than \$100 per week on fuel. It is also evident that almost all of the smallholder families had some form of personal transport with only seven indicating that the question did not apply to them and a further 12 failing to respond.

**Table 6. Fuel cost**

<b>Fuel cost (\$)</b>	<b>Frequency</b>	<b>Percentage</b>
0 - 30	38	7.7
30 - 60	164	33.3
60 – 100	167	33.9
100 – 200	91	18.5
More than 200	13	2.6
Not applicable	7	1.4
Total	480	100.0

### **3.4 General attitudes**

#### **Satisfaction with the smallholder lifestyle**

In general, the smallholder respondents indicated they tended to be satisfied to very satisfied with their smallholding lifestyle (n = 488, mean 4.15, s.d. 1.25), with only 57 respondents (11.7 per cent) either dissatisfied or strongly dissatisfied.

#### **Importance of lifestyle or land use**

To identify the importance of lifestyle and land use, respondents were asked to indicate whether lifestyle, land use or both of these preferences equally were most important to them. Of the 487 respondents who answered this question the equal importance of lifestyle and land use was the most common choice (265, or 54.4 per cent) followed by lifestyle (200 or 41.1 per cent) with land use being chosen as the most important by a small number of respondents (22, or 4.5 per cent).

#### **Reasons for living on a smallholding**

The smallholder respondents were asked to indicate the importance of 11 reasons for living on their smallholding for when they purchased their property and at present. The results for the eleven reasons when purchased are shown in Table 7. Rural or country lifestyle; peace, quiet and tranquillity; space, privacy, openness; no close neighbours; and clean air, no smog were the most important reasons for living on a smallholding, each receiving a score higher than four (very important). Of lesser importance was having a safe place to bring up children, having animals, less pressure and relaxing, and wanting a larger section than you can get in a city or town. It was also generally important, but less important than other reasons, to learn about farming, have a place to retire and use the smallholding for a source of extra income.

In terms of differences between the importance of items when purchased and at present (see Table 8) there was a significant increase in importance for the items rated by the respondents for a number of the reasons indicated by an asterisk. All these items encapsulate important elements of the rural lifestyle that smallholders consistently emphasise. The significant

increase might suggest that for some smallholders their expectations regarding the importance of the items has been realised since living on their smallholding.

**Table 7. Importance of reasons for living on a smallholding when purchased**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Rural or country lifestyle	476	4.18	.79
Clean air, no smog	477	4.13	.98
Space, privacy, openness, no close neighbours	474	4.12	.96
Peace and quiet, tranquillity	477	4.08	.94
Safe and healthy place to raise children	428	3.72	1.36
Wanted a larger section than you can get in a city or town	458	3.49	1.47
Can have animals	467	3.45	1.33
Less pressure, relaxing	469	3.34	1.27
Place to retire	467	2.58	1.49
Source of extra income	469	2.46	1.42
Learn about farming	451	2.35	1.19

Note: Measurement scale = (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important.

**Table 8. Importance of reasons for living on a smallholding at present**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Clean air, no smog	476	4.23*	.91
Peace and quiet, tranquillity	475	4.22*	.87
Rural or country lifestyle	476	4.22	.78
Space, privacy, openness, no close neighbours	475	4.21*	.89
Safe and healthy place to raise children	423	3.71	1.42
Wanted a larger section than you can get in a city or town	452	3.50	1.47
Can have animals	464	3.48	1.32
Less pressure, relaxing	467	3.45*	1.25
Place to retire	466	2.74*	1.50
Source of extra income	467	2.52	1.42
Learn about farming	448	2.44*	1.23

Note: Measurement scale = (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important. Significant difference from when purchased is indicated by an asterix.

### **Disadvantages of smallholding**

As well as being asked about reasons for living on a smallholding respondents were also asked to assess nine disadvantages when purchased and the same nine disadvantages at present. The results of this enquiry into disadvantages when purchased are shown in Table 9.

**Table 9. Disadvantages of living on a smallholding when purchased**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Time required for work, chores and/or property maintenance	483	2.11	1.08
Unexpected costs and/or problems with local authorities	480	1.98	1.25
Can't subdivide any further	477	1.86	1.25
Lack of services (water/sewerage/refuse)	480	1.76	1.01
Lack of income from smallholding	482	1.67	1.01
Distance to primary and/or secondary schools	443	1.65	1.03
Noise and/or undesirable odours from established farmers	479	1.60	1.01
Limited number of local clubs, organisations, sport and/or recreation facilities	481	1.57	.87
Land use conflict with established farmers and/or their attitudes to newcomers	478	1.53	.96
Animal manure on the roads	479	1.48	.99

Note: measurement scale: (1) Not at all relevant (2) Slightly relevant (3) Moderately relevant (4) Very relevant (5) Extremely relevant.

Time required for work, chores and/or property maintenance and unexpected costs and/or problems with local authorities were generally ranked as the most relevant disadvantages, although the results show that on average these were of only moderate relevance. The remaining problems were on average only slightly to moderately relevant. Inability to subdivide, lack of services, noise and lack of income were generally considered the next most relevant disadvantages. Animal manure on roads, land use conflict with established farmers and/or their attitudes to newcomers, limited number of local clubs, organisations, sport and/or recreation facilities and distance to primary and/or secondary schools were less relevant than the other factors.

The results of enquiry into the relevance of disadvantages at present is shown in Table 10. When compared with the averages for the assessment of disadvantages when purchased there is an indication that most of the disadvantages have received a higher score meaning that they have become more relevant. This at least shows that the disadvantages are still of relevance, time required for work, chores and/or property maintenance and unexpected costs and/or problems with local authorities generally ranked as the most relevant disadvantages. These data suggest that smallholders have developed a realistic appreciation of the disadvantages of the rural lifestyle. However, as the data in the previous section show, they still have positive reasons for living on their smallholding.

**Table 10. Disadvantages of living on a smallholding at present**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Time required for work, chores and/or property maintenance	482	2.45*	1.18
Unexpected costs and/or problems with local authorities	478	2.28*	1.34
Can't subdivide any further	476	2.27*	1.48
Lack of services (water/sewerage/refuse)	479	1.95*	1.15
Lack of income from smallholding	481	1.79*	1.09
Noise and/or undesirable odours from established farmers	479	1.76*	1.17
Limited number of local clubs, organisations, sport and/or recreation facilities	477	1.67*	.99
Animal manure on the roads	476	1.58*	1.09
Land use conflict with established farmers and/or their attitudes to newcomers	474	1.58	1.04
Distance to primary and/or secondary schools	440	1.58	1.00

Note: measurement scale: (1) Not at all relevant (2) Slightly relevant (3) Moderately relevant (4) Very relevant (5) Extremely relevant. Significant difference from when purchased indicated by an asterisk.

### Thinking about the land

The smallholder respondents were asked to indicate the relevance for each of four ways of thinking about land. The results of this enquiry are shown in Table 11. In terms of mean scores the first and last conceptualisation were judged on average to be the most relevant of the four statements. Valuing the land in terms of it being like the artist's canvas with importance placed on pleasant living environment by planting either trees, shrubs or flowers was, in general, the most relevant example. This was followed in terms of relevance by thinking about the land as an investment and economic resource. Overshadowed by these two statements was the idea that the land was ones' ancestor and the perceived need to restore some natural qualities, with each having only slight to moderate relevance. These results are consistent with other research which shows that many smallholders do not engage in production, combined with the observation that most have gardens. We know from Table 4 that garden centres are an important retail provider for Selwyn District smallholders. This highly rated conceptualisation reflects a gardening approach to land use.

**Table 11. Conceptualisations of the land**

<b>Examples</b>	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
The land is an investment and an economic resource. As such the uses I make of it need to be able to pay their way. It is important to me that I improve the productive capacity of my land so that it is in better condition when I pass it on.	483	3.21	1.30
The land is my ancestor. The primary bond I have with it is emotional. I hold this land as a focus for future generations.	480	2.29	1.34
This land has been damaged and exploited. It is important to me to restore some natural qualities to this place.	480	2.26	1.27
This land is like an artist's canvas to me. It is important to me to create a pleasant living environment by planting either trees, shrubs or flowers.	481	3.49	1.20

Note: measurement scale: (1) Not at all relevant (2) Slightly relevant (3) Moderately relevant (4) Very relevant (5) Extremely relevant.

### Most common important values

Three hundred and forty four respondents provided the most important values of smallholdings they wanted protected for the future in an open question. The responses that were most frequent are summarised in Table 12. As shown, the most common response was about restricting the smallness of lot sizes and objections to further subdivision of the land. More positively, the next most common value was about peace and quiet and having a relaxed lifestyle, as well as having a good water supply or access to clean water. Having the freedom to do what you want was also a reasonably common response. Again, these important values consistently reflect issues of great concern to smallholders as demonstrated in a number of studies (e.g., Fairweather, 1993). In terms of categories with smaller numbers, less than 20 respondents mentioned either restricting space, privacy or noise levels. Keeping rates down, ability or right to subdivide, safety and good soil also warranted inclusion in the table because they were mentioned by more than one respondent.

**Table 12. Most common important values**

	<b>n</b>
Restrict smallness of block size/limit subdivisions/no subdivision to smaller lots	92
Peace and quiet, relaxed lifestyle	55
Good water supply/access to clean water	54
Freedom to do what you want	35
Space	18
Privacy	13
Restrict noise levels	12
Keep rates down	6
Ability or right to subdivide	6
Safety	5
Good soil	4

### Important community objectives

The results of the enquiry into important community objectives for the present time are shown in Table 12. Feeling safe at all times and having enough clean water in lakes, streams or rivers to support living things were, on average, the most important community objectives. These items received a very high score. Next, good health care, chance of a good education, wages and salaries to be enough to earn a decent living, thriving local businesses, business and households use innovative and efficient ways to protect the environment and prevent pollution and maintain and conserve a diversity of indigenous plants and animals and their varied habitats, were all judged to be more than very important objectives. Adequate benefit or pension for the sick, elderly or unemployed was very important. Opportunities for meaningful participation with local or central government on community issues, opportunities to participate in cultural, leisure, arts and sports activities and easy access to beaches, rivers, lakes, hills and mountains were in general held to be moderately to very important.

When couched in terms of importance in ten years time (see Table 13), all of the objectives rose slightly in importance when compared to the present community objectives. Feeling safe at all times and having enough clean water in lakes, streams or rivers to support living things remained the most important objectives.



**Table 13. Important community objectives - now**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Feeling safe at all times	482	4.60	.72
Enough clean water in lakes, streams or rivers to support living things	476	4.58	.70
Good health care for all	481	4.22	.87
Chance of a good education	476	4.22	.95
Business and households use innovative and efficient ways to protect the environment and prevent pollution	478	4.18	.88
People to be in work	477	4.16	.88
Wages and salaries to be enough to earn a decent living	478	4.15	.95
Maintain and conserve a diversity of indigenous plants and animals and their varied habitats	478	4.13	.95
Thriving local businesses	476	4.08	.85
Adequate benefit or pension for the sick, elderly or unemployed	479	4.00	.97
Easy access to beaches, rivers, lakes, hills and mountains	479	3.99	1.02
Opportunities for meaningful participation with local or central government on community issues	477	3.59	.99
Opportunities to participate in cultural, leisure, arts and sports activities	475	3.50	.97

Note: Measurement scale = (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important.

**Table 14. Important community objectives – in ten years**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Feeling safe at all times	475	4.65	.67
Enough clean water in lakes, streams or rivers to support living things	470	4.63	.66
Good health care for all	475	4.37	.81
Business and households use innovative and efficient ways to protect the environment and prevent pollution	469	4.29	.82
Chance of a good education	471	4.27	.94
People to be in work	469	4.20	.86
Maintain and conserve a diversity of indigenous plants and animals and their varied habitats	469	4.20	.94
Wages and salaries to be enough to earn a decent living	470	4.18	.96
Thriving local businesses	469	4.14	.80
Adequate benefit or pension for the sick, elderly or unemployed	472	4.12	.95
Easy access to beaches, rivers, lakes, hills and mountains	472	4.06	1.01
Opportunities for meaningful participation with local or central government on community issues	470	3.65	.98
Opportunities to participate in cultural, leisure, arts and sports activities	470	3.54	.99

Note: Measurement scale = (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important. Also all means were significantly different from now.

## Participation in voluntary groups or organisations

Three hundred and twelve respondents provided the names of voluntary groups or organisations in which they were involved. The responses that were most frequent are summarised in Table 15. The most common response was a sports club followed by participation in a church, school support activities, plunket or playcentre and Saint Johns with six noting community or neighbourhood watch groups. Since respondents could provide more than one answer percentages are not provided in the table.

**Table 15. Participation in voluntary groups or organisations**

	<b>n</b>
Sports	96
Church	30
School	21
Playcentre/plunket	12
St Johns	15
Community/neighbourhood watch	6

In further enquiry, of the 279 who replied 63 or 16.5 per cent of the individuals or families were involved in one voluntary group or organisation. Sixty-three of the 279, or 17.5 per cent, were involved in two and 69 or 18.1 per cent were involved in three groups. One hundred and eighteen of the 279, or 23.9 per cent, were involved in more than three voluntary groups or organisations.

## 3.5 Land and production

### Land use and production

Land use and production information was gathered using three question sets that respectively dealt with livestock, plants and other land uses.

Table 16 shows responses to five aspects of production, giving the number of respondents for each question and average gross income. Of note, some of the average annual gross income figures were derived from one or only a few smallholdings which means they are likely to be unreliable as examples of these smallholder land uses. As shown in Table 16, the grazing of beef and sheep occurred on many of the smallholdings with the grazing of sheep having a lower average value of production when compared to beef. Although only eight were involved in deer production the average annual gross income from this stock was high as was income from pig farming. In terms of overall average for the income figures from Table 16, there were 348 smallholdings that reported income for animal uses with an average income for these smallholdings of \$11,385. The lowest income was \$80 from sheep grazing and the highest was \$400,000 from pig farming.

**Table 16. Land use and value of production - Livestock**

	<b>Number of properties</b>	<b>Percentage of livestock farmers</b>	<b>Average annual gross income (03-04)</b>
Dairy	16	5.0	6,456
Grazing – beef	98	31.1	5,260
Grazing – sheep	100	31.7	3,348
Calf rearing	16	5.0	6,227
Deer	8	2.5	34,310
Goats	4	1.3	2,800
Horses	45	14.3	10,015
Poultry	14	4.4	27,213
Pigs	8	2.5	52,218
Other animals:			
Alpacas	2	0.6	10,500
Rabbits	1	0.3	7,000
Ostrich	1	0.3	8,000
Total	315	100	11,385

For plant land uses, the main activity in terms of numbers of smallholdings was cropping (see Table 17). Market garden/vegetables had the highest average annual gross income followed by nursery and vineyards. The average gross income for the 90 smallholdings with income from plants was \$13,851. The lowest was for flower production (\$85) and the highest was for fruit production (\$150,000). The average gross income level was higher for plant land uses when compared to animal uses, although fewer had income from plants.

**Table 17. Land use and value of production - Plants**

	<b>Number of properties</b>	<b>Percentage of plant uses</b>	<b>Average annual gross income (03-04)</b>
Crops (grain, seed and fodder)	45	45.5	3,974
Flowers	9	10.0	4,853
Market garden/vegetables	21	21.2	22,895
Fruit (pip, berry, kiwifruit, citrus, etc.)	14	14.1	17,946
Vineyards	4	4.0	25,250
Nursery	5	5.0	31,200
Other plants	1	1.0	5,000
Total	99	100	13,851

Only two smallholdings reported income from trees for forestry or firewood. One had an income of \$900 and the other had an income of \$3,000 with neither specifying a species. In addition, no smallholding had tourism or other business activity.

Overall there were 340 smallholdings that reported land use income with the overall average income for 2003/2004 being \$8,777. Of note, 85 per cent reported income of less than \$20,000 per annum. Eight per cent had income of \$20,000 or more to \$50,000, and a further seven per cent had income of \$50,000 to the maximum of \$400,000.

## Production estimates

Table 18 shows how smallholders estimated their production levels compared to two years ago and for two years time. Nearly one half of those who responded to both questions indicated their production would be about the same. Around 40 per cent indicated their production was better than it had been previously and a similar percentage indicated an increase in production for two years time. The smallest of the three proportions indicated production had been lower than in the past and less than ten per cent estimated it would be lower in two years time.

**Table 18. Production estimates**

	Higher	Lower	Same	Total
Compared to two years ago	155 39.1%	53 13.4%	188 47.5%	396 100%
Production in two years time	177 44.1%	27 6.7%	197 49.1%	401 100%

## Capital investment

The results of the enquiry into levels of capital investment for the previous year are shown in Table 19. Overall, there were low levels of capital investment, with most in the none and zero to \$4,999 range (309 of 455 or 37.9 per cent). However, some smallholders had made substantial investment with 28 or 6.2 per cent spending more than \$50,000.

**Table 19. Level of capital investment**

\$	Frequency	Percentage
None	141	31.0
Up to \$5,000	168	36.9
\$5,001-10,000	62	13.6
\$10,001-20,000	27	5.9
\$20,001-50,000	29	6.4
\$50,001 or more	28	6.2
Total	455	100.0

## Sources of information

The importance of various sources of information for the purposes of development and business activity are shown in Table 20. The averaged judgements of importance ranged from moderately important to very important for some sources and from slightly important to moderately important for others. The most important source of information was the respondent's own experience with a slightly lower level of importance for friends, neighbours or other farmers and growers. A vet was the next most important source of information. The local supplier and then an industry organisation were, in general, considered to be the next most important source of information. Next, the internet was slightly to moderately important. A government agency and a private consultant were the least important of the eight sources presented.

**Table 20. Importance of sources of information**

	<b>n</b>	<b>Mean</b>	<b>Std. Deviation</b>
Friends, neighbours or other farmers and growers	457	3.37	1.23
Industry organisation (e.g. Tree Crops Association)	446	2.43	1.28
A government agency	432	1.86	1.00
Local supplier or retailer	447	2.67	1.18
A vet	449	2.89	1.38
Private consultant	438	1.70	1.00
The internet	443	2.42	1.35
Own experience	450	3.87	1.10

Note: Measurement scale = (1) Not at all important (2) Slightly important (3) Moderately important (4) Very important (5) Extremely important.

### **Subdivide or build a second dwelling**

The ability to subdivide was presumed to be of particular interest to smallholders. When asked how likely it was that they would intend to subdivide in the next ten years the average response was on the unlikely side of neither likely nor unlikely (mean 2.83). However, of the 485 respondents 193 or 40.3 per cent considered it either likely or very likely.

In terms of the measure of likelihood to want to build a second dwelling in ten years the average response (mean 2.83) was very similar to the ability to subdivide. Also similar was the percentage considering it likely they would want to build a second dwelling with 38.2 per cent or 191 of the 486 respondents considering it likely or very likely.

### **Satisfaction and preferred size**

In terms of satisfaction with current land size most were satisfied (310 of 481 or 64.4 per cent) with 171 or 35.6 per cent being dissatisfied. When asked about preferred land size (see Table 21) of the 185 who wished to change, most (65 or 35.1 per cent) preferred more than 20 hectares. The next most common preferred size was 4.01 to 10 hectares (34 or 18.1 per cent). Most smallholders (66.5 per cent) preferred a size above 10.01 hectares and only four (2.2 per cent) indicated they preferred a residential section.

**Table 21. Preferred land size**

<b>Size range (ha)</b>	<b>Frequency</b>	<b>Percentage</b>
Residential section	4	2.2
0.5 to 1	26	14.1
1.01 to 2	15	8.1
2.01 to 4	17	9.2
4.01 to 10	34	18.4
10.01 to 20	24	13.0
More than 20	65	35.1
Total	185	100.0

## **Lawn and garden care**

Four hundred and eighty three smallholders responded to the question regarding lawn size with only five of these indicating the question was not applicable. Most smallholders reported having an area of lawn of between 0.5 and one hectare. With the addition of those with more than one hectare, 45.1 per cent had a lawn of more than 0.5 of a hectare. The second most common size was between 0.25 and 0.5 hectares, which meant that almost 80 per cent of the respondents had sizeable areas of lawn. In keeping with these large areas of lawn the average amount of time spent caring for a lawn and garden was seven hours per week with a maximum of 50 hours per week and a minimum of 0.2 of an hour per week (n = 475). Just over one half (259 of 484 or 50.1 per cent) had an installed irrigation system for their lawn or garden. The annual cost of caring for the lawn, including costs of fertiliser sprays and purchases of plants or shrubs was quite high with an average of \$1,415.64 per property (range \$1 to \$30,000, n = 422) which included costs for consultants and contractors.

## **Fresh water**

With regard to the enquiry of sources of fresh water, 82 of 492 (16.6 per cent) indicated they were on the district scheme and 186 of 492 (37.8 per cent) indicated they were using their own well. In addition, sixteen smallholders specified another source. Nine had a shared well and three had a community well. Two smallholders relied on rain water and one used a UV purifier to obtain clean water.

## **Septic tanks**

With regard to the age of septic tanks, on average smallholders had their tanks installed just over sixteen years ago (mean 16.83, range 0 to 70, n = 407). The average length of time since tanks were last cleaned was almost two years ago (mean 1.94, range 0 to 25, n = 406). Table 22 shows the age of septic tanks in age groups. Most were less than ten years old and a sizable number of septic tanks were up to 40 years of age. Relatively few were more than 40 years old.

**Table 22. Age of septic tank**

<b>Years</b>	<b>Frequency</b>	<b>Percentage</b>
0 – 9.99	175	43.0
10 - 19.99	110	27.0
20 - 39.99	107	26.3
40 – 59.99	13	3.2
> 60	2	.5
Total	407	100.0

## **Importance of rural problems**

Seven common rural problems were assessed by smallholders, first for importance on their smallholding and second for importance to farms in general. The results of this enquiry are shown in Tables 23 and 24.

First, to consider problems as they relate to their smallholding, fire risk and lack of water were generally considered very important problems with animal welfare also being of particular concern. Noxious weeds, overuse of agrichemicals and nitrogen leaching were

generally of comparatively less concern falling being moderate to very important. Loss of biodiversity was also generally held to be moderate to very important, but was of least concern to the smallholders.

Of interest regarding the measures of importance attributed to farmers in general, all of the problems were judged to be more important to farm than to their smallholding. In terms of ranking within the farmer set, like the problems of importance to smallholders it was judged that fire risk, lack of water and animal welfare were most important. Similar to importance for smallholding, the problems of noxious weeds, overuse of agrichemicals and nitrogen leaching were generally of comparatively less concern and loss of biodiversity was considered the farmers least important problem. Perhaps the difference between the two tables can be attributed to the being seen as more relevant to farmers.

**Table 23. Importance of rural problems on your smallholding**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Noxious weeds	478	3.40	1.332
Fire risk	480	4.11	1.120
Animal welfare	474	3.91	1.336
Loss of biodiversity	438	3.23	1.486
Overuse of agrichemicals	469	3.56	1.565
Lack of water	473	4.00	1.325
Nitrogen leaching	455	3.45	1.610

Note: Measurement scale = (1) Not at all important (2) Slightly important  
(3) Moderately important (4) Very important (5) Extremely important.

**Table 24. Importance of rural problems for Selwyn District farmers in general**

	<b>n</b>	<b>Mean</b>	<b>Std. Dev</b>
Noxious weeds	444	3.93	1.042
Fire risk	446	4.43	.823
Animal welfare	441	4.24	.930
Loss of biodiversity	408	3.60	1.234
Overuse of agrichemicals	435	3.97	1.089
Lack of water	439	4.38	.868
Nitrogen leaching	427	3.91	1.134

Note: Measurement scale = (1) Not at all important (2) Slightly important  
(3) Moderately important (4) Very important (5) Extremely important.

### 3.6 Respondent Characteristics

#### Gender and age

There were more males (292 of 472 or 61.9 per cent) than females (180 of 472 or 38.1 per cent) who answered the questionnaire. The average age of the respondents was just over 50 (mean 50.2, std dev 12.02, n = 469) with the range being from 27 to 85.

#### Household composition

In terms of the composition of households, the majority (427 of 466 who responded or 91.6 per cent) of respondents had a husband wife or partner. Twenty reported having a mother or father living with them. Two hundred and forty six had sons or daughters living with them

and six had a brother or sister in the household. Only three reported living with a boyfriend or girlfriend and ten had a flatmate.

In a different view of household composition (see Table 25), only 26 people lived alone. The majority of smallholder households had two people with a sizeable proportion having four people. When considering households with more than two people these constituted 53.7 per cent of respondent households.

**Table 25. Number in the household**

<b>Number in the household</b>	<b>Frequency</b>	<b>Percentage</b>
1	26	5.5
2	193	40.8
3	77	16.3
4	108	22.8
5	42	8.9
6	22	4.7
7	4	.8
8	1	.2
Total	473	100.0

A number of questions addressed employment characteristics, including hours in paid work, off-farm employment and income.

### **Smallholding income**

Table 26 shows the average annual gross income from the smallholding for the year July 03 to June 04. In terms of the ranges provided most smallholders (243 of 454 or 53.5 per cent) had an income from \$1 to \$15,000 the next largest group was those with no personal income (119 of 454 or 26.2 per cent). Only 15.7 per cent had annual income greater than \$15,000.

**Table 26. Annual gross income from the smallholding**

<b>Income (\$)</b>	<b>Frequency</b>	<b>Percentage</b>
No income	119	26.2
1 - 15,000	243	53.5
15,001-30,000	31	6.8
30,001-50,000	13	2.9
50,001-70,000	18	4.0
70,001-100,000	9	2.0
100,001 and above	21	4.6
Total	454	100.0

### **Smallholding expenditure**

There were a high proportion of smallholders with modest expenditures on their properties (see Table 27). For the July 03 to June 04 year, 334 of 452 or 73.9 per cent of the smallholdings had expenditure between \$1 and \$15,000. Only 17.4 per cent had expenditure exceeding \$15,000.



**Table 27. Annual expenditure**

<b>Expenditure (\$)</b>	<b>Frequency</b>	<b>Percentage</b>
No expenditure	28	6.2
1 - 15,000	334	73.9
15,001-30,000	50	11.1
30,001-50,000	16	3.5
50,001-70,000	7	1.5
70,001-100,000	6	1.3
100,001 and above	11	2.4
<b>Total</b>	<b>452</b>	<b>100.0</b>

### Hours of work

Table 28 shows the average number of hours of paid and unpaid work undertaken on respondent smallholdings. Only a small number (59) reported being engaged in paid work on their smallholding with just over 20 hours for their average number of paid work hours. Partners were of similar numbers and hours for paid work. There were more other family people engaged in paid work but with similar hours on average. Only four smallholders employed a contract manager.

Also shown in Table 28 is unpaid work and this was done by nearly all of the smallholders. The number of hours of unpaid work was, however, minimal with the respondent, for example, only doing approximately 15 hours per week on average.

**Table 28. Hours of work per week**

	<b>Paid</b>		<b>Unpaid</b>	
	<b>n</b>	<b>Avg.</b>	<b>n</b>	<b>Avg.</b>
The respondent	59	21.6	439	14.6
Partner	51	20.5	379	12.0
Other	86	21.8	92	8.0
Contracted manager	4	32.0		

### Off-farm employment status

With regard to off-farm employment status, Table 29 shows that almost half of the respondents were employed off-farm. There were similar proportions for both respondents and partners for part-time, not employed off farm, seeking work and retired. In the 'other' category there were more not employed off-farm and fewer by proportion seeking work presumably reflecting the presence of sibling family members.

**Table 29. Off-farm employment status**

	<b>Full time</b>	<b>Part time</b>	<b>Not employed off-farm</b>	<b>Seeking work</b>	<b>Retired</b>	<b>Total</b>
The respondent	231	112	77	4	54	478
	48.3%	23.4%	16.1%	.8%	11.3%	100.0%
Partner	187	119	71	4	44	425
	37.5%	23.8	14.2%	.8%	8.8%	100.0%
Other	56	29	34	5	16	138
	40.6%	21%	24.6%	3.6%	11.6%	100.0%

Table 30 shows a view of aggregate work patterns for respondents and their partners. As shown, of the possible combinations, the highest percentage was for couples that both worked full-time.

**Table 30. Aggregate couple work patterns**

	<b>Frequency</b>	<b>Percent</b>
Both full time	165	39.2
Full time and part-time	54	12.8
Full time and not employed off-farm	66	14.9
Full time and seeking work	2	.5
Full time and retired	8	2.0
Both part time	32	7.6
Part time and not employed off-farm	24	5.7
Part time and seeking work	5	1.2
Both not employed off-farm	24	5.7
Not employed off-farm and retired	1	.2
Seeking work and retired	5	1.1
Both seeking work	2	.5
Retired and part time	1	.2
Both retired	35	8.3
Total	421	100.0

### **Off-farm income**

A large proportion of the respondents reported having an income other than that gained from their smallholding (see Table 31). Of the 421 who answered this question, 371 (88.1 per cent) reported having received off-farm income. Of those with off-farm income, many had a substantial income with 149 (35.4 per cent of the total) earning more than \$50,000 per annum.

**Table 31. Off-farm income (Respondent)**

<b>Income(\$)</b>	<b>Frequency</b>	<b>%</b>
No income	50	11.9
1 - 15,000	69	16.4
15,001-30,000	61	14.5
30,001-50,000	92	21.9
50,001-70,000	68	16.2
70,001-100,000	37	8.8
100,001 and above	44	10.5
Total	421	100.0

The results from the question on partner off-farm income are shown in Table 32. Slightly fewer partners than respondents had no income and a higher proportion earned from \$1 to \$15,000 and from \$15,000 to \$30,000. There was also a smaller proportion of partners receiving income over \$50,000 with 28.7 per cent in this higher income group compared to 35.4 for respondents.

**Table 32. Annual off-farm income (partner)**

<b>Income range (\$)</b>	<b>Frequency</b>	<b>%</b>
No income	41	11.1
1 - 15,000	62	16.8
15,001-30,000	73	19.8
30,001-50,000	87	23.6
50,001-70,000	49	13.3
70,001-100,000	31	8.4
100,001 and above	26	7.0
Total	369	100.0

Other people in the household had lower incomes, presumably reflecting the presence of siblings in the households (see Table 33). A large proportion (49 per cent) had no income or earned less than \$15,000.

**Table 33. Off-farm income (other)**

<b>Annual income</b>	<b>Frequency</b>	<b>%</b>
No income	28	25.4
1 - 15,000	26	23.6
15,001-30,000	32	29.0
30,001-50,000	18	16.4
50,001-70,000	6	5.4
70,001-100,000	0	0.0
100,001 and above	0	0.0
Total	110	100.0

### 3.7 Differences amongst smallholders based on income from the land

An investigation was performed to identify differences between smallholders in terms of off-farm income in order to identify those with high levels of on-farm business activity compared to other smallholders. The amount of income from land use was used to form four categories of smallholder business activity. The categories and their proportions of smallholders are shown in Table 34. Most smallholders had zero income implying no smallholding business activity. Some had a modest income of up to \$5,000. Less than 20% had more substantial incomes of between \$5,001 and \$20,000. The smallest group had more intensive on-farm business activity as is evident by their having an income of over \$20,000.

Categories of smallholders based on income from land use are used in this section to investigate differences based on business activity. Please note that in some instances to have sufficient numbers to perform the analysis, comparisons are made by combining the two highest income categories to form a category of income of more than \$5,000. This category has 127 smallholders or 25.5 per cent of the smallholder sample.

**Table 34. Annual farm income (other)**

Income range (\$)	Frequency	%
0	212	42.5
1 to 5,000	160	32.1
5,001 to 20,000	84	16.8
more than 20,000	43	8.6
Total	499	100.0

#### Size differences

First, when analysed in terms of size differences there was evidence that farm income was associated with different sized properties. There was no meaningful difference between smallholdings in terms of size between the three lower income categories. However, there was a difference in size (t-test,  $p < 0.05$ ) between those with income of more than \$20,000 (mean 12.94, std dev 9.95,  $n = 43$ ) and those with no income (mean 6.24, std dev 5.93,  $n = 198$ ). This shows that smallholdings with higher income tend to be larger than those with no income.

#### Lifestyle and land use

An investigation of differences in the importance of lifestyle, land use or both was undertaken using the more than \$5,000 income category to provide sufficient numbers for testing. Overall, the differences in responses, which are shown in Table 35, were significant (chi square,  $p < 0.05$ ). As shown, those with the highest farm income tended to consider both lifestyle and land use more important than those in lower income categories. Those in the lower income groups considered lifestyle more important than had those in the high group.

**Table 35. Lifestyle and land use differences**

<b>Income Range (\$)</b>	<b>Lifestyle</b>	<b>Land use</b>	<b>Both</b>	<b>Total</b>
0	104 51.2%	9 4.4%	90 44.3%	203 100.0%
1 to 5,000	71 44.9%	8 5.1%	79 50.0%	158 100.0%
> 5,000	25 19.8%	5 4.0%	96 76.2%	126 100.0%
Total	200 41.1%	22 4.5%	265 54.4%	487 100.0%

### Ways of thinking about the land

There were also differences between the highest and lowest income categories based on the way they thought about the land. Those with the highest income (more than \$20,000) tended to agree with the view that the land was an investment and an economic resource (mean 3.81, std dev 1.27, n = 42, t-test,  $p < 0.05$ ) when compared to those with zero income (mean 2.94, std dev 1.34, n = 201). In addition, those with no income tended to rank more highly the idea that the land was like an artists canvas (mean 3.55, std dev 1.92, n = 199, t-test,  $p < 0.05$ ) whereas those with income more than \$20,000 tended to see this value statement as less relevant (mean 3.02, std dev 1.37, n = 43).

### Subdivision

In terms of likelihood of wanting to subdivide those in the highest income category (more than \$20,000) were more likely to want to subdivide in the next ten years (mean 3.10, std dev 1.51, n = 42) than those in the zero income category (mean 2.57, std dev 1.60, n = 202, t-test,  $p < 0.05$ ).

### Production estimates

There were differences between income levels for estimates of current of production levels and production two years ago (chi square,  $p < 0.05$ ). These were shown by using a more than \$5,000 income category which combined the two highest income categories. As shown in Table 36, those with the highest income tended to estimate their production to be higher, whereas those with lower incomes had more estimates of production being the same.

**Table 36. Production estimate differences**

<b>Income</b>	<b>Higher</b>	<b>Lower</b>	<b>Same</b>	<b>Total</b>
0	50 38.8%	10 7.8%	69 53.5%	129 100.0%
1 to 5,000	47 32.6%	27 18.8%	70 48.6%	144 100.0%
> 5,000	58 47.2%	16 13.0%	49 39.8%	123 100.0%
Total	155 39.1%	53 13.4%	188 47.5%	396 100.0%

### Costs of lawn care

With regard to costs associated with caring for a lawn or garden, there was a difference between those with the highest income (more than \$20,000) (mean 2.57, std dev 1.60, n = 202) and each of the other three income categories (t-tests,  $p < 0.05$ ). The tests showed that the zero income (mean \$1215, std dev 1641, n = 161), 0 to \$5,000 (mean \$1278, std dev 2337, n = 148) and \$5,001 to \$20,000 (mean \$1172, std dev 1529, n = 202) categories all had lower mean scores than the more than \$20,000 category (mean \$3,299, std dev 7078, n = 36). In general, those smallholders with high farm income also spent more on lawn care.

### Capital investment

Expenditure on capital investment was in keeping with levels of on-farm income (Chi square,  $p < 0.05$ ). These were shown by using a more than \$5,000 income category to combine the two highest income categories. As shown in Table 37, those with the highest income had high spending on capital investment at almost all of the levels of investment. Only when investment was less than \$5,000 did capital investment for the \$1 to \$5,000 income category exceed the higher category. As would be expected those with no income tended to also have no capital investment.

**Table 37. Capital investment differences**

Income range (\$)	None	Up to \$5,000	\$5,001 to \$10,000	\$10,001 to \$20,000	\$20,001 to \$50,000	More than \$50,000	Total
0	78 44.3%	55 31.3%	12 6.8%	10 5.7%	14 8.0%	7 4.0%	176 100.0%
1 to 5,000	50 32.1%	69 44.2%	23 14.7%	4 2.6%	3 1.9%	7 4.5%	156 100.0%
> 5,000	13 10.6%	44 35.8%	27 22.0%	13 10.6%	12 9.8%	14 11.4%	123 100.0%
Total	141 31.0%	168 36.9%	62 13.6%	27 5.9%	29 6.4%	28 6.2%	455 100.0%

### Profit or loss

To provide another view of differences in smallholders, a rudimentary calculation of profit or loss was derived by subtracting smallholder expenditure categories from smallholder annual gross income categories. These results are shown in Table 38. As shown, those in the higher income category had a greater proportion of those who had made a profit and a noticeably lower proportion of those who had broken even. Those who had not earned from their smallholding had a greater proportion that had made a loss.

**Table 38. Profit or loss**

<b>Income range (\$)</b>	<b>Loss</b>	<b>Even</b>	<b>Profit</b>	<b>Total</b>
0	84 49.4%	70 41.2%	16 9.4%	170 100.0%
1 to 5,000	19 12.3%	120 77.4%	16 10.3%	155 100.0%
5,001 to 20,000	10 11.9%	64 76.2%	10 11.9%	84 100.0%
> 20,000	5 13.2%	12 31.6%	21 55.3%	38 100.0%
Total	118 26.4%	266 59.5%	63 14.1%	447 100.0%

### Work hours on the property

There were also differences between income categories based on the number of hours spent working on smallholding properties. On average, those with the highest smallholding income worked more paid hours on their properties than other smallholders with lower smallholding income. Those with income of more than \$20,000 worked an average of 25.32 hours per week (std dev 16.35, n = 34) whereas those with zero income (mean 13.65, std dev 14.09, n = 182), 0 to \$5,000 (mean 12.53, std dev 11.95, n = 145) and \$5,001 to \$20,000 (mean 16.26, std dev 12.98, n = 78) categories all had less hours of paid work per week.

### Off-farm employment status

Differences in off-farm employment status were investigated using the more than \$5,000 income category which combined the two highest income categories to provide sufficient numbers for testing. Overall, the differences in responses which are shown in Table 39 were significant (chi square,  $p < 0.05$ ). Those with the highest income had fewer employed off-farm and less of them were retired when compared to those in the lower income categories. In addition, as shown in Table 40, a similar situation is evident for respondent partners.

**Table 39. Off-farm employment status (respondent)**

<b>Income</b>	<b>Full-time</b>	<b>Part-time</b>	<b>No off-farm</b>	<b>Retired</b>	<b>Total</b>
0	102 52.3%	43 22.1%	26 13.3%	24 12.3%	195 100.0%
1 to 5,000	86 54.8%	32 20.4%	21 13.4%	18 11.5%	157 100.0%
> 5,000	43 35.2%	37 30.3%	30 24.6%	12 9.8%	122 100.0%
Total	231 48.7%	112 23.6%	77 16.2%	54 11.4%	474 100.0%

**Table 40. Off-farm employment status (partner)**

Income range (\$)	Full-time	Part-time	No off-farm	Retired	Total
0	92 53.8%	38 22.2%	25 14.6%	16 9.4%	171 100.0%
1 to 5,000	60 42.6%	41 29.1%	22 15.6%	18 12.8%	141 100.0%
> 5,000	35 32.1%	40 36.7%	24 22.0%	10 9.2%	109 100.0%
Total	187 44.4%	119 28.3%	71 16.9%	44 10.5%	421 100.0%

Finally, there were differences between income categories based on annual off-farm income. Using the three categories of smallholder income it can be seen in Table 41 that more respondents with higher smallholding income had no off-farm income. In addition, as shown in Table 42 there was a similar situation for respondent partners.

**Table 41. Off-farm annual income (respondent)**

Income range (\$)	No income	\$1 - \$15,000	\$15,001-30,000	\$30,001-50,000	\$50,001-70,000	\$70,001-100,000	\$100,001 and above	Total
0	13 8.1%	30 18.6%	14 8.7%	44 27.3%	30 18.6%	17 10.6%	13 8.1%	161 100.0%
1 to 5,000	13 9.0%	23 15.9%	27 18.6%	26 17.9%	22 15.2%	10 6.9%	24 16.6%	145 100.0%
> 5,000	24 20.9%	16 13.9%	20 17.4%	22 19.1%	16 13.9%	10 8.7%	7 6.1%	115 100.0%
Total	50 11.9%	69 16.4%	61 14.5%	92 21.9%	68 16.2%	37 8.8%	44 10.5%	421 100.0%

**Table 42. Off-farm annual income (partner)**

Income range (\$)	No income	\$1 - \$15,000	\$15,001-30,000	\$30,001-50,000	\$50,001-70,000	\$70,001-100,000	\$100,001 and above	Total
0	13 8.1%	30 18.6%	14 8.7%	44 27.3%	30 18.6%	17 10.6%	13 8.1%	161 100.0%
1 to 5,000	13 9.0%	23 15.9%	27 18.6%	26 17.9%	22 15.2%	10 6.9%	24 16.6%	145 100.0%
> 5,000	24 20.9%	16 13.9%	20 17.4%	22 19.1%	16 13.9%	10 8.7%	7 6.1%	115 100.0%
Total	50 11.9%	69 16.4%	61 14.5%	92 21.9%	68 16.2%	37 8.8%	44 10.5%	421 100.0%



## **Chapter 4**

### **Summary of Results, Discussion and Conclusion**

#### **4.1 Introduction**

The general aim of this research was to provide a profile of smallholders in Selwyn District and identify the social and environmental issues of interest to the Selwyn District Council. As shall be explained in this chapter, the survey and analysis of the results worked well to meet these aims. The chapter begins with a summary of the results, discusses them and draws some conclusions.

#### **4.2 Summary and discussion of results**

This summary and discussion begins with general information, then deals with general attitudes, land and production and respondent characteristics and ends with differences amongst smallholders. To provide a frame of reference for the results, comparisons are made with the recent national survey of smallholders (n = 947; Cook & Fairweather, 2005).

##### **General information**

To begin with the general information, in the Selwyn District most smallholdings (81%) were ten hectares or less in size. The average size was 7.4 hectares. This was slightly smaller than the estimated average of 8.5 hectares from the national survey. The average length of stay was just over ten years. This was less than, but similar to, the average of 12.22 years of the national survey. The proportion of smallholders with farm experience (65.6 per cent) was also similar to the national study (71.2 per cent) as was the proportion of Selwyn District smallholders who intended to stay on their properties indefinitely. Therefore with respect to size, length of stay and farm experience smallholders of the Selwyn District are similar to other smallholders in New Zealand.

##### **Location and travel distances**

West Melton, Rolleston and Lincoln were nominated by smallholders as the nearest towns or villages than any other. As far as identifying with the nearest towns and villages, the three towns of West Melton, Rolleston and Christchurch were most frequently nominated. The results also show that some smallholders do not identify with their nearest town or village. Christchurch was commonly used by most smallholders for a wide range of goods and services as well as employment. Only local attendance at local schools exceeded attendance by smallholder children at city schools.

##### **General attitudes**

Smallholders tended to be satisfied with their smallholding lifestyle. Lifestyle in conjunction with land use and solely lifestyle were the most common reasons for smallholding. Few valued smallholding simply for land use.

There were a variety of reasons for living on a smallholding and also a range of reported disadvantages of smallholding. General characteristics of country life were valued including

rural or country living as well as peace, quiet and tranquillity, space, privacy, openness, no close neighbours, and clean air and no smog. Time required for work, chores and/or property maintenance and unexpected costs and/or problems with local authorities were commonly held disadvantages. Smallholders have developed a more realistic view of smallholding but still have positive reasons for being on their smallholding.

Levels of agreement with statements about how the land could be valued showed ready identification with the land in terms of it being like an artists canvas with importance placed on creating a pleasant living environment by planting either trees, shrubs or flowers. Valuing the land as an investment and economic resource with the imperative to improve production was also favoured by smallholders. Most smallholders see their land in gardening rather than productive terms.

When invited to provide their own values they want protected, issues regarding subdivision of the land were of primary concern to smallholders. Smallholders dislike the idea of close neighbours and believe that further subdivision would change the nature of their smallholding experience. Further, the common values of peace and quiet and a relaxed lifestyle are likely linked to concerns over further subdivision. Water issues were also a common concern with having a good water supply and access to clean water being common remarks. Freedom to do what you want was also important to many smallholders.

As a community objective it was important for smallholders to feel safe at all times and have enough clean water in lakes, streams or rivers to support living things. Also generally supported were opportunities for meaningful participation with local or central government on community issues, participation in cultural, leisure, arts and sports activities. Easy access to beaches, rivers, lakes, hills and mountains was less important than other objectives. The suggestion of greater importance of community objectives for the future may indicate the importance to give priority to the objectives over time.

It was found that there was a good deal of smallholders participating in voluntary groups and organisations. Many were involved in local organisations, particularly sports clubs, with church and school organisations also having a good number of volunteers.

## **Land and production**

The results showed that 340 of 492 respondents (69 per cent) had some level of income from land use. However, much of this income was not substantial with an overall average income for 2003/2004 of \$8,777. Eighty-five per cent of those with farm income reported income less than \$20,000 per annum. These results indicate that most smallholders were apparently not serious about producing from the land but show that a good proportion use their land as a means of supplementing their income. A similar enquiry in the national survey found that 65.7 were engaged in productive activity, which is similar to the 69 per cent found in this study. The lack of tourism or other business activity is not unusual as the national survey which had 947 respondents found only three had tourism activities and only one had other business activity. However, given that we believe that many farms have diversified into non-farm business, this finding of very low tourism or other business activity is surprising. Clearly, while some diversification has occurred it is of a very low level.

Own experience was the most important source of information for the purposes of development and business activity on the smallholdings. Friends, neighbours or other farmers and growers were also very important sources of information. Of interest, government agencies and private consultants were the least important sources.

On the question of intention to subdivide approximately 40 per cent would, if possible, subdivide in the next ten years with a similar percentage intending to build a second dwelling. These results appear to conflict with the imperatives to have peace, quiet and tranquillity, space, privacy, openness, no close neighbours and also with the very commonly expressed concern over further subdivision. Similarly, of those who wanted to change their land size most preferred a larger property of about ten hectares. It would seem that as an ideal most would like a larger land area but personal gain from subdivision and sale may well be the more realistic option. Also the seeming anomaly of resistance to subdivision while wanting to do it themselves could be explained by the former being an imposition whereas the latter is a personal choice involving personal gain.

Current production estimates tended to be for the same or higher than two years ago and for the next two years. There were, however, low levels of capital investment in keeping with the low levels of on-farm income.

In terms of lawn care 45 per cent of smallholders had an area of lawn that was greater than 0.5 of a hectare. Almost a working day of more than six hours was spent on average per week caring for the lawn and garden. In another measure of commitment to lawn or garden care just over half had an installed irrigation system. The average amount of money spent per year on the lawn or garden was substantial at an average of \$1,415.64 per property and the results show that smallholders expended a good deal of time and effort in caring for and maintaining their lawns and gardens. As noted in the analysis of differences based on on-farm income those with the highest on-farm income spent more on their lawn and garden. In further analysis, not shown in the results, respondents and partners with the highest off-farm income also spent significantly more on lawn or garden care (t-test,  $p < 0.05$ ; respondent - \$3,181; partner - \$3,577) than other smallholders (respondent - \$1,172; partner - \$1,268). It is therefore evident that the level of annual spending on lawn and garden was related to level of either on-farm or off-farm income.

With regard to sources of fresh water, less than half responded to this question which found that most (37.5 per cent) used their own well while some (16.6 per cent) were on the district scheme. Almost all smallholders had a septic tank. On average the tanks had been installed just over sixteen years ago. Cleaning of tanks was frequent with the average length of time since tanks were last cleaned being two years ago.

All of the rural problems presented to smallholders were important. The most important were fire risk and lack of water. Loss of biodiversity was important but was the least important problem. Similar ranking was found for smallholder judgements of the importance of the problems to farmers with the indication that problems were seen by smallholders to be more important to farmers. This likely reflects the view of smallholders that farmers were more serious about production. It also suggests that rural problems are perceived to be associated with intensive production and that smallholding does not contribute to problems such as fire risk or loss of biodiversity.

### **Personal and family characteristics**

Slightly more males than females answered the questionnaire with the average age just over 50. Most were families as the majority had a wife or partner and just over half had children living at home. Most smallholders had little or no income from their smallholding with just over half having no smallholding income. Expenditure on the smallholding was also modest with most (74%) spending \$1 to \$15,000. Only a small proportion of partners and

respondents did paid work on their smallholding (ten per cent), with 50 people spending over 20 hours per week on average on their properties.

More than half were employed off-farm with most in full-time work. Only two per cent were fully retired with no full or part-time work. Only approximately 12 per cent received no off-farm income. For many off-farm income was substantial with 35.4 per cent of respondents and 28.7 per cent of partners receiving more than \$50,000 per annum.

### **4.3 Differences between smallholders with business activity and others**

Smallholders with more substantial income from smallholding activities were different in a number of respects to other smallholders. Those with income had larger properties and fewer of those in this group solely associated with lifestyle as an important factor in their smallholding. To further contrast the high income group from the other smallholders, they tended to agree that the land was an investment and an economic resource, whereas those of low on-farm income were more predominantly in agreement that the land was like an artists canvas. Those of high on-farm income were more likely to want to subdivide, though this could be attributed to their larger land size than a motivation associated with high income. The higher income group also tended to report gains in the level of productivity and were more optimistic that further gains could be made. High on-farm income was also associated with more money spent on care for the lawns and gardens. This did not relate to size of garden, because there was no significant difference between lawn and garden size based on on-farm income.

Capital investment was higher for the high on-farm income group, as was receiving profit from on-farm activity. The number of paid on-farm work hours was also higher. Smallholdings with the highest on-farm income were less likely to be employed off-farm and fewer of them were retired when compared to those in the lower income categories. Finally, there were differences between income categories based on annual off-farm income. More smallholders with high on-farm income had no off-farm income.

### **4.4 Conclusion**

In this study the findings show a number of interesting points about smallholding and smallholders in the Selwyn District. First, where comparison could be made with the national survey there was little difference between these smallholders and other smallholders in New Zealand. This suggests that Selwyn District smallholders have similar characteristics to other smallholders in New Zealand. However, unlike those not close to a city, smallholders in the Selwyn District acquire a range of goods and services and have employment in Christchurch City. Indeed, many appear to be living a very urban life in the country because, like the occupation of an urban section, they do not utilise the land for farming or growing and tend to rely on income from employment in the city to support their households.

This tendency for off-farm work and a suggested urban life in the country is supported by the analysis of differences between those with high on-farm income and other smallholders. Those with little or no on-farm income have smaller properties and tend to have higher off-farm income. They seem to have replaced their urban section with a rural smallholding with the difference being travelling further to work while gaining an appreciation of country living.

The findings also suggest that given the availability of smallholdings of modest size then this type of smallholder is more likely to be accommodated. Little or no productive use of the land is associated with smaller size smallholdings whereas larger lot sizes have the potential for productive use of the land. Therefore, should there be an imperative to encourage use of the land for productive activity it could be met by simply allowing larger smallholding lot sizes and avoiding the division of land into smaller sized smallholdings.

The question of allowing subdivision within existing smallholdings will not be easily dealt with according to the findings. On the one hand, individual smallholders are likely thinking of their personal interests by favouring the ability to subdivide and build on their properties. On the other hand, subdivision is of particular concern to smallholders when it might happen on adjacent land. A further interesting point raised was that smallholders with high off-farm income were more likely want to subdivide. As well as suggesting that those with smallholdings of larger size would logically be more likely to subdivide, this could also mean that this high income group views the land as a marketable commodity. Indeed, it has been identified that it is a tendency of these smallholders to think of the land as an economic resource. This suggests that this particular group tend to be motivated to portion and sell their land, should they expect it to be profitable. Nevertheless, if it is the role of the authorities to protect local values then subdivision needs to be restricted. This will be at the lament of those with plans for subdividing, in particular those with high on-farm income, who may ironically also hold the values the authority seeks to uphold. In any event, subdivision is likely to continue to be an issue in the near future.

To conclude, smallholdings in the Selwyn District of between 1 and 40 hectares comprise both smallholdings with city working owners and larger holdings more likely to support farm activities. While most smallholders had some level of income from their land, most of these had only low on-farm income. In short, it is not common for smallholding households to rely on productive farm activity to support their households and many of them do not appear to be thinking of themselves as farmers. Many of them appear to sit somewhere between living an urban life in the country and being farmers. Most use Christchurch for employment as well as for the provision of a range of common services and retail shopping, however, most also identified with local towns or villages. While they can be identified as Selwyn District smallholders that identify with their local area, these factors seem not to readily relate to how they live their everyday lives.



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Appendix 1  
The Questionnaire



**SELWYN DISTRICT COUNCIL  
SMALLHOLDING SURVEY**

February, 2005

**Instructions: For each question, please select one option and write the corresponding number in the box on the right hand side of the page. In some cases, answer directly in the box or write in the space provided.**

### **A. Background**

1. What is the approximate size of your smallholding? (hectares)
  
2. For how many years have you lived on your smallholding?
  
3. Before buying a smallholding did you or another person in your household have previous farming experience or live on a farm?  

(1) Yes      (2) No
  
4. How long do you intend to stay on your smallholding? Please specify the approximate number of years. If indefinitely, put 99.

### **B. Location and travel distances**

1. Please write the name of the town or village nearest to your smallholding.

---

2. How far is your nearest town or village from your smallholding?

- |                |                      |                      |
|----------------|----------------------|----------------------|
| (1) 0 – 2 kms  | (4) 10 – 20 kms      | <input type="text"/> |
| (2) 2 – 5 kms  | (5) 20 – 50 kms      |                      |
| (3) 5 – 10 kms | (6) More than 50 kms |                      |

3. Does your household identify itself as part of your nearest town or village?

- (1) Yes      (2) No \*

\* If **no**, please write the name of the place your household identifies with.

---

4. Please indicate the distance that you travel and write the location for **each** of the following services and retailers that you typically use.

- |                 |                      |
|-----------------|----------------------|
| (1) 0 – 5 kms   | (4) 20 – 50 kms      |
| (2) 5 – 10 kms  | (5) More than 50 kms |
| (3) 10 – 20 kms | (6) Not applicable   |

	Distance	Location
Doctor		
Preschool		
Primary school		
Secondary school		
Banking		
Public library		
Dairy, fast food or takeaways		
Café, licenced hotel or bar		
Farming supplies or general hardware store		
Garden centre		
Pharmacy		
Clothing retailer		
Church		
Supermarket shopping		
Car servicing and repairs		
Purchases of petrol		

5. Please indicate the distance that you travel and write the location for your off-farm place of work. If you do not have off-farm work, please use option 6

- |                 |                      |
|-----------------|----------------------|
| (1) 0 – 5 kms   | (4) 20 – 50 kms      |
| (2) 5 – 10 kms  | (5) More than 50 kms |
| (3) 10 – 20 kms | (6) Not applicable   |

	Distance	Location
Off-farm place of work		

6. On average, about how much are the weekly fuel costs for you and your family?

- |                  |                     |
|------------------|---------------------|
| (1) 0 - \$30     | (4) \$100 – \$200   |
| (2) \$30 - \$60  | (5) More than \$200 |
| (3) \$60 – \$100 | (6) Not applicable  |

### C. General Attitudes

1. How satisfied or dissatisfied are you with your smallholding lifestyle?

- |                                       |                    |
|---------------------------------------|--------------------|
| (1) Very dissatisfied                 | (4) Satisfied      |
| (2) Dissatisfied                      | (5) Very satisfied |
| (3) Neither dissatisfied or satisfied |                    |

2. In terms of the balance between lifestyle and land use (production), which is **most** important to you?

- (1) Lifestyle (2) Land use (3) Both equally important

3. We are interested in your reasons for smallholding when you purchased and at present. How important is **each** of the following reasons?

- |                          |                         |
|--------------------------|-------------------------|
| (1) Not at all important | (4) Very important      |
| (2) Slightly important   | (5) Extremely important |
| (3) Moderately important |                         |

	When purchased	At present
Rural or country lifestyle	<input type="text"/>	<input type="text"/>
Peace and quiet, tranquillity	<input type="text"/>	<input type="text"/>
Space, privacy, openness, no close neighbours	<input type="text"/>	<input type="text"/>
Clean air, no smog	<input type="text"/>	<input type="text"/>
Safe and healthy place to raise children	<input type="text"/>	<input type="text"/>
Learn about farming	<input type="text"/>	<input type="text"/>
Can have animals	<input type="text"/>	<input type="text"/>
Less pressure, relaxing	<input type="text"/>	<input type="text"/>
Wanted a larger section than you can get in a city or town	<input type="text"/>	<input type="text"/>
Place to retire	<input type="text"/>	<input type="text"/>
Source of extra income	<input type="text"/>	<input type="text"/>

4. We are interested in the disadvantages of smallholding when you purchased and at present. How relevant is **each** of the following disadvantages?

- |                         |                        |
|-------------------------|------------------------|
| (1) Not at all relevant | (4) Very relevant      |
| (2) Slightly relevant   | (5) Extremely relevant |
| (3) Moderately relevant |                        |

	When Purchased	At Present
Animal manure on the roads	<input type="text"/>	<input type="text"/>
Land use conflict with established farmers and/or their attitudes to newcomers	<input type="text"/>	<input type="text"/>
Limited number of local clubs, organisations, sport and/or recreation facilities	<input type="text"/>	<input type="text"/>
Can't subdivide any further	<input type="text"/>	<input type="text"/>
Unexpected costs and/or problems with local authorities	<input type="text"/>	<input type="text"/>
Time required for work, chores and/or property maintenance	<input type="text"/>	<input type="text"/>
Distance to primary and/or secondary schools	<input type="text"/>	<input type="text"/>
Lack of services (water/sewerage/refuse)	<input type="text"/>	<input type="text"/>
Noise and/or undesirable odours from established farmers	<input type="text"/>	<input type="text"/>
Lack of income from smallholding	<input type="text"/>	<input type="text"/>

5. The following are four examples of how people think about their land. For **each** example, please indicate how relevant it is to you.

- |                         |                        |
|-------------------------|------------------------|
| (1) Not at all relevant | (4) Very relevant      |
| (2) Slightly relevant   | (5) Extremely relevant |
| (3) Moderately relevant |                        |

The land is an investment and an economic resource. As such the uses I make of it need to be able to pay their way. It is important to me that I improve the productive capacity of my land so that it is in better condition when I pass it on.

The land is my ancestor. The primary bond I have with it is emotional. I hold this land as a focus for future generations.

This land has been damaged and exploited. It is important to me to restore some natural qualities to this place.

This land is like an artist's canvas to me. It is important to me to create a pleasant living environment by planting either trees, shrubs or flowers.

6. Please list up to three of the most important values of smallholding that you want to see protected for the future.

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7. How important is it to address **each** of the following objectives to make your community a better place to live in now and in ten years time.

- (1) Not at all important                      (4) Very important  
 (2) Slightly important                      (5) Extremely important  
 (3) Moderately important

	Now	In ten years
Good health care for all	<input type="text"/>	<input type="text"/>
Chance of a good education	<input type="text"/>	<input type="text"/>
Wages and salaries to be enough to earn a decent living	<input type="text"/>	<input type="text"/>
People to be in work	<input type="text"/>	<input type="text"/>
Thriving local businesses	<input type="text"/>	<input type="text"/>
Feeling safe at all times	<input type="text"/>	<input type="text"/>
Adequate benefit or pension for the sick, elderly or unemployed	<input type="text"/>	<input type="text"/>
Opportunities for meaningful participation with local or central government on community issues	<input type="text"/>	<input type="text"/>
Opportunities to participate in cultural, leisure, arts and sports activities	<input type="text"/>	<input type="text"/>
Easy access to beaches, rivers, lakes, hills and mountains	<input type="text"/>	<input type="text"/>
Business and households use innovative and efficient ways to protect the environment and prevent pollution	<input type="text"/>	<input type="text"/>
Enough clean water in lakes, streams or rivers to support living things	<input type="text"/>	<input type="text"/>
Maintain and conserve a diversity of indigenous plants and animals and their varied habitats	<input type="text"/>	<input type="text"/>

8. Please name up to two voluntary groups or organisations for which you or other members of your household either attend meetings, help out, or participate in activities.

---

9. How many voluntary groups or organisations in total are you or other members of your household involved in?

## D. Land use

1. What business activity occurred on your land **last season** (July 03 to June 04)?  
Please indicate the **approximate income** for each of the following options.

<b>Livestock</b>	<b>Approx. Gross Annual Income 2003/04</b>
Dairy	
Grazing – beef	
Grazing – sheep	
Calf rearing	
Deer	
Goats	
Horses	
Poultry	
Pigs	
Other animals - please specify:	

<b>Plants</b>	<b>Approx. Gross Annual Income 2003/04</b>
Crops (grain, seed and fodder)	
Flowers	
Market garden/vegetables	
Fruit (pip, berry, kiwifruit, citrus, etc.)	
Vineyards	
Nursery	
Other plants - please specify:	

<b>Trees for forestry or firewood</b>	<b>Approx. Gross Annual Income 2003/04</b>
Specify species:	

## Land use continued

Other Land Uses	Approx. Gross Annual Income 2003/04
Tourism	
Other business activity - please specify:	

2. How important are each of the following as sources of information for the development and management of business activity on your smallholding?

- (1) Not at all important                      (4) Very important  
 (2) Slightly important                      (5) Extremely important  
 (3) Moderately important

Friends, neighbours or other farmers and growers	<input type="text"/>
Industry organisation (e.g. Tree Crops Association)	<input type="text"/>
A government agency	<input type="text"/>
Local supplier or retailer	<input type="text"/>
A vet	<input type="text"/>
Private consultant	<input type="text"/>
The internet	<input type="text"/>
Own experience	<input type="text"/>
Other - please specify _____	<input type="text"/>

3. What is the likelihood that in the next ten years you would want to subdivide your property?

- (1) Very unlikely                      (4) Likely  
 (2) Unlikely                      (5) Very likely  
 (3) Neither unlikely or likely

4. What is the likelihood that in the next ten years you would want to build a second dwelling on your property?

- (1) Very unlikely                      (4) Likely  
 (2) Unlikely                      (5) Very likely  
 (3) Neither unlikely or likely



5. Please compare production levels two years ago, and anticipated production in two years, with current levels. Do you estimate production to be higher, lower or about the same?

(1) Higher    (2) Lower    (3) About the same

My production now compared to two years ago is...

Compared to now, my production in two years time will be...

6. Are you satisfied with your current land size?

(1) Yes    (2) No\*

\* **If no** what size would you prefer?

- |                         |                     |
|-------------------------|---------------------|
| (1) Residential section | (5) 4.01ha to 10ha  |
| (2) 0.5ha to 1ha        | (6) 10.01ha to 20ha |
| (3) 1.01ha to 2ha       | (7) More than 20ha  |
| (4) 2.01ha to 4ha       |                     |

7. What capital investment in production have you made in the last year?

- |                    |                      |
|--------------------|----------------------|
| (1) None           | (4) \$10,001-20,000  |
| (2) Up to \$5,000  | (5) \$20,001-50,000  |
| (3) \$5,001-10,000 | (6) \$50,001 or more |

8. What size is the lawn and garden on your property?

(1 ha = 100 x 100 metres)

- |              |                    |
|--------------|--------------------|
| (1) 0 – ¼ ha | (4) More than 1 ha |
| (2) ¼ - ½ ha | (5) Not applicable |
| (3) ½ - 1 ha |                    |

9. How many hours per week on average are spent caring for your lawn and garden?

10. Do you have an installed irrigation system for your lawn and/or garden?

(1) Yes    (2) No

11. Please write the approximate cost of caring for your lawn and garden from July 2003 to June 2004. Include the costs of fertiliser, sprays, purchases of plants and shrubs and any costs for consultants and contractors.

Approximate annual cost

12. Please indicate the source for your clean water.

(1) Yes

(2) No

	District scheme	<input type="checkbox"/>
	Own well	<input type="checkbox"/>
Other - please specify _____		<input type="checkbox"/>

13. If you have a septic tank, how many years ago was it installed?

14. If you have a septic tank, how many years ago was it cleaned?

15. How important is **each** of the following rural problems on your smallholding or for Selwyn District farms in general?

(1) Not at all important

(4) Very important

(2) Slightly important

(5) Extremely important

(3) Moderately important

(6) Not applicable

	Your smallholding	Farms in general
Noxious weeds	<input type="text"/>	<input type="text"/>
Fire risk	<input type="text"/>	<input type="text"/>
Animal welfare	<input type="text"/>	<input type="text"/>
Loss of biodiversity	<input type="text"/>	<input type="text"/>
Overuse of agrichemicals	<input type="text"/>	<input type="text"/>
Lack of water	<input type="text"/>	<input type="text"/>
Nitrogen leaching	<input type="text"/>	<input type="text"/>

## E. Respondent Characteristics

1. Please indicate your gender.

(1) Male

(2) Female

2. Please state your age.

(Years)

3. Which, if any, of the following people live with you in your household?

(1) Yes (2) No

Husband, wife or partner

Mother or father

Son(s) or daughter(s)

Sister(s) or brother(s)

Girlfriend or boyfriend

Flatmate(s)


4. Including yourself, how many people live in your household?

5. Please select the appropriate range for the **annual gross income** from your smallholding (July 03 to June 04).

(1) No income

(2) \$1 - \$15,000

(3) \$15,001-30,000

(4) \$30,001-50,000

(5) \$50,001-70,000

(6) \$70,001-100,000

(7) \$100,001 and above

6. Please select the appropriate range for **annual expenditure** on your small holding (July 03 to June 04).

(1) No income

(2) \$1 - \$15,000

(3) \$15,001-30,000

(4) \$30,001-50,000

(5) \$50,001-70,000

(6) \$70,001-100,000

(7) \$100,001 and above

7. How many hours per week on average do the following people **work on your property** doing either paid or unpaid work?

You

Your partner

Other people, please specify (1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

Contracted manager

**Paid  
Hrs/wk**

**Unpaid  
Hrs/wk**



8. What is the off-farm employment status of the following people in your household?

- |                           |                  |
|---------------------------|------------------|
| (1) Full-time             | (4) Seeking work |
| (2) Part-time             | (5) Retired      |
| (3) Not employed off-farm |                  |

You

Your partner

Other people, please specify (1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_


9. What is the off-farm annual income of the following people in your household?

- |                     |                         |
|---------------------|-------------------------|
| (1) No income       | (5) \$50,001-70,000     |
| (2) \$1 - \$15,000  | (6) \$70,001-100,000    |
| (3) \$15,001-30,000 | (7) \$100,001 and above |
| (4) \$30,001-50,000 |                         |

You

Your partner

Other people, please specify (1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_


**Thank you for completing our questionnaire. Please return your questionnaire using the freepost envelope.**